Figure S2: Zipf's law and Heaps' law resulted from the stochastic model. The six plots display three typical examples for $\alpha = 0.5$, $\alpha = 1.0$ and $\alpha = 1.5$. The slopes of Zipf's plot and Heaps' plot are respectively obtained by the maximum likelihood method and the least square method. The simulation results agree well with the theoretical expectations.

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